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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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07/22/2004

Ingvar Andersson

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BUCHANAN, INGERSOLL & ROONEY PC
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EXAMINER

JACOBSON, MICHELE LYNN

ART UNIT

PAPER NUMBER

1794

NOTIFICATION DATE

DELIVERY MODE

10/08/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary	Application No. 10/502,090	Applicant(s) ANDERSSON, INGVAR	
	Examiner MICHELE JACOBSON	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7,8 and 10-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5, 7, 8 and 10-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

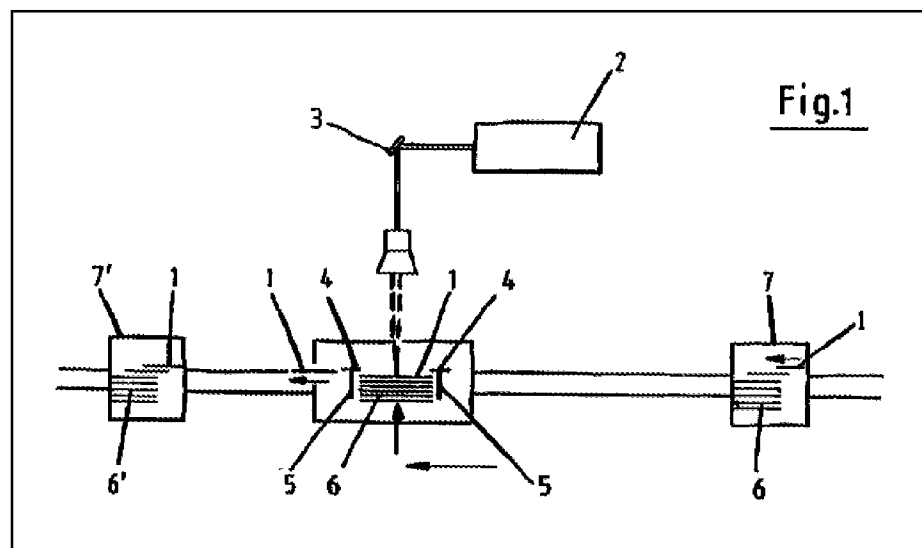
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-4, 8, 10-13 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiteder et al. U.S. Patent No. 6,007,756 and Masui U.S. Patent No. 4,834,244.

3. Weiteder et al. disclose "A process and device for perforating and/or semi-cuts in printed multilayer composite material by means of laser beams from at least one laser arranged in a laser station." (See Fig 1, and Col. 1, lines 6-9). Said multilayer composite materials

including paperboard laminated with polyethylene (Col. 1, lines 12-14).

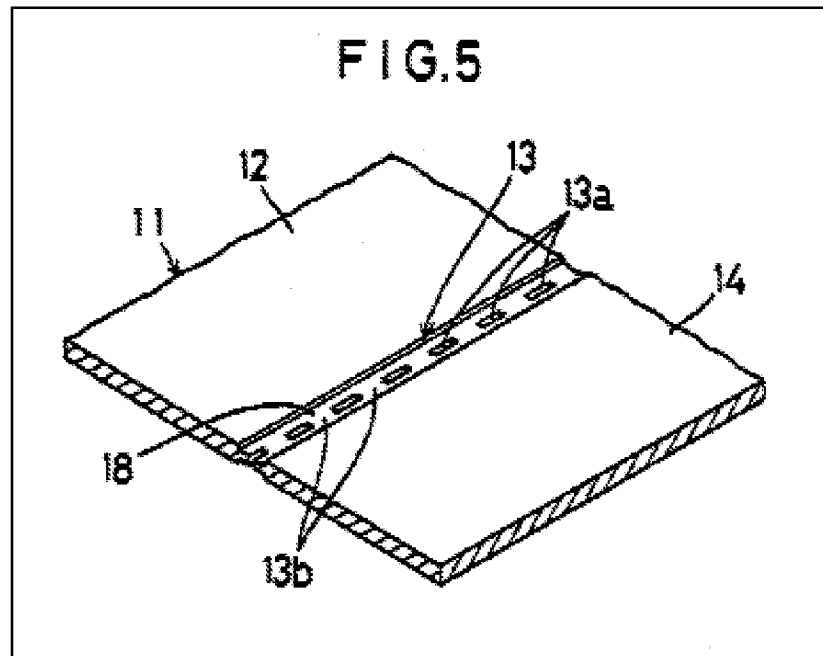
Weiteder et al. also disclose means for laterally feeding the



paperboard to a cut station.

4. Weiteder et al. do not recite compressing the region of the laminated material to be perforated prior to laser perforation.

5. Masui discloses “a boxboard-made case for use in packaging facial tissues or the like”. (Col. 1, lines 6-8) Masui furthermore discloses “On the top wall **12** of the case **11** there is embossed a ruled line **18** extending along the line of



perforations **13** in overlapping relation therewith" (See Fig. 5 and col. 2, lines 41-43)

6. It would have been obvious to one having ordinary skill in the packaging arts at the time the invention was made to have compressed the paperboard laminate prior to perforating it with laser exposure.

7. The suggestion/motivation would have been to weaken the non-perforated portions of the paperboard core layer of the packaging laminate. Masui recites this motivation: “the ruled line **18** provided along the line of perforations **13** in overlapping relation therewith serves to break the body of the boxboard at non-cutout portions and concurrently to break the fiber structure of the boxboard through application of a force of

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compression, so that the strength of the non-cutout portions **13a** is considerably lowered. Thus, when the perforations **13** are cut off, the ruled line **18** serves to guide the force of tearing from one cutout **13a** to a next adjacent cutout **13a**.”(Masui, Fig. 5, col. 2, line 61- Col. 3, line 2).

8. Regarding claims 1, 8, 12 and 16: The examiner notes that although the motivation to combine Weiteder with Masui is different from the applicant's stated motivation of “solving the problem of the build up of ridges of residual material” (Col. 2, line19); the attribute claimed naturally flows from the references cited. The compression line taught by Masui combined with the laser perforation taught by Weiteder would provide a laminate as recited in claims 1 and 8 where the “build-up of thermoplastic residual material around the perforation line after the laser burning ... [is] substantially located entirely below the level of the surrounding surface of the packaging laminate”. As stated in Masui, the strength of the non-cutout portions of the fiberboard is decreased by compression. It would have been obvious to one of ordinary skill in the art to optimize the amount of compression of the paperboard in order to control the frangibility of the laminate depending on the intended use of the package. The range of 20-70% compression recited in claims 1, 8, 12 and 16 would have inherently been obtained by this optimization. Since the motivation for providing the compression line taught by Masui is to increase the frangibility of the perforated line, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the compression step could be performed before or after the perforation step to still produce the same outcome in decreasing the strength of the paperboard. Therefore, the method

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step recited in claim 1 and the product-by-process step recited in claim 8 of compressing the paperboard before the perforation step would have been obvious to one of ordinary skill in the art.

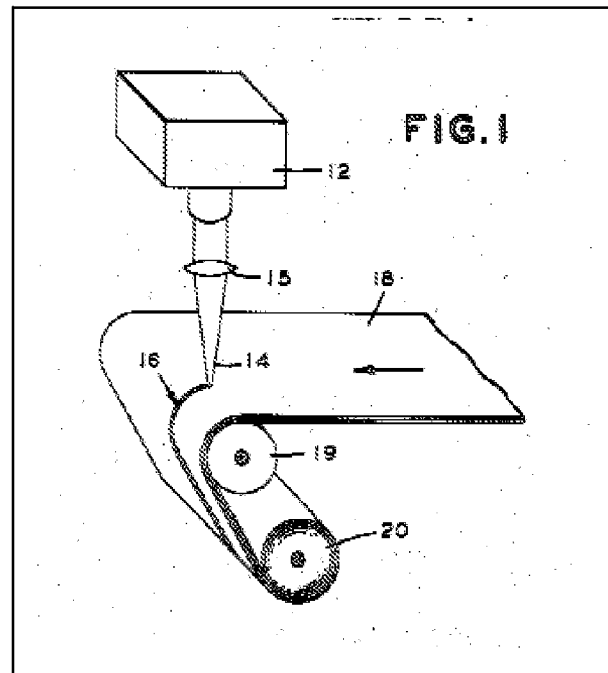
9. Regarding claims 19 and 20: Since the paperboard used for the core of the laminate would have less structural integrity than the thermoplastic material coating, during the compression step of Masui the thermoplastic material would inherently sink in but not be compressed. Instead, the paperboard would be compressed as recited in claims 19 and 20.

10. Regarding claim 4: Weiteder teaches a means for laterally feeding the paperboard to a cut station. It would have been obvious to one having ordinary skill in the packaging arts at the time the invention was made to provide a station for handling the packaging laminate and to use rollers for the means of transporting the laminate as recited in claim 4.

11. Regarding claims 3, 10, 13 and 17: It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the compression line wider than the perforation line because on and around the perforation line is where the laminate would need to be weakened to facilitate tearing. It would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize this width as claimed in claims 3, 10, 13 and 17 to increase the frangibility of the laminate product.

12. Regarding claims 11 and 18: Weiteder teaches using polyethylene or polypropylene as the thermoplastic material to produce a paperboard laminate as

recited in claim 11. It would have been obvious to one having ordinary skill in the packaging arts at the time the invention was made to vary the surface weight or grammage of the thermoplastic material as recited in claims 11 and 18 in order to optimize the product based on the end use of the film. A thicker layer would provide more protection of the paperboard while a thinner layer may be preferable for lighter weight packaging. Furthermore, there appears to be no criticality to the ranges of surface weight or grammage of the thermoplastic material as recited in claims 11 and 18.



13. Claims 1, 3-4, 8, 10-13 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bowen U.S. Patent No. 3,909,582 and Masui U.S. Patent No. 4,834,244.

14. Bowen discloses "a method of forming a line of weakness in multilayer laminates. More particularly, the invention is directed to the use of laser radiant energy to form an easy open tear line in multilayer laminates, especially those made with polymeric materials." (See Fig 1 and Col. 1, lines 5-9). Bowen further discloses that the composition of the laminates may include paper layered with either polypropylene or polyethylene (Col. 9, lines 57-60). A means for handling the packaging laminate after

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laser exposure (Fig. 1) where the “multilayer laminate **18** [is] passed over a backing roll **19** and ... fed onto a wind up roll **20**” is also disclosed. (see Fig 1 and col. 4, lines 57-59).

15. Bowen does not recite compressing the region of the laminated material to be perforated prior to laser perforation.

16. Masui discloses “a boxboard-made case for use in packaging facial tissues or the like”. (Col. 1, lines 6-8) Masui furthermore discloses “On the top wall **12** of the case **11** there is embossed a ruled line **18** extending along the line of perforations **13** in overlapping relation therewith” (See Fig. 5 and col. 2, lines 41-43)

17. It would have been obvious to one having ordinary skill in the packaging arts at the time the invention was made to have compressed the paperboard laminate prior to perforating it with laser exposure.

18. The suggestion/motivation would have been to weaken the non-perforated portions of the paperboard core layer of the packaging laminate. Masui recites this motivation: “the ruled line **18** provided along the line of perforations **13** in overlapping relation therewith serves to break the body of the boxboard at non-cutout portions and concurrently to break the fiber structure of the boxboard through application of a force of compression, so that the strength of the non-cutout portions **13a** is considerably lowered. Thus, when the perforations **13** are cut off, the ruled line **18** serves to guide the force of tearing from one cutout **13a** to a next adjacent cutout **13a**.”(Masui, Fig. 5, col. 2, line 61- Col. 3, line 2).

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19. Regarding claims 1, 8, 12 and 16: The examiner notes that although the motivation to combine Bowen with Masui is different from the applicant's stated motivation of "solving the problem of the build up of ridges of residual material" (Col. 2, line19); the attribute claimed naturally flows from the references cited. The compression line taught by Masui combined with the laser perforation taught by Weiteder would provide a laminate as recited in claims 1 and 8 where the "build-up of thermoplastic residual material around the perforation line after the laser burning ... [is] substantially located entirely below the level of the surrounding surface of the packaging laminate". As stated in Masui, the strength of the non-cutout portions of the fiberboard is decreased by compression. It would have been obvious to one of ordinary skill in the art to optimize the amount of compression of the paperboard in order to control the frangibility of the laminate depending on the intended use of the package. The range of 20-70% compression recited in claims 1, 8, 12 and 16 would have inherently been obtained by this optimization. Since the motivation for providing the compression line taught by Masui is to increase the frangibility of the perforated line, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the compression step could be performed before or after the perforation step to still produce the same outcome in decreasing the strength of the paperboard. Therefore, the method step recited in claim 1 and the product-by-process step recited in claim 8 of compressing the paperboard before the perforation step would have been obvious to one of ordinary skill in the art.

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20. Regarding claims 19 and 20: Since the paperboard used for the core of the laminate would have less structural integrity than the thermoplastic material coating, during the compression step of Masui the thermoplastic material would inherently sink in but not be compressed. Instead, the paperboard would be compressed as recited in claims 19 and 20.

21. Regarding claim 4: It would have been obvious to one having ordinary skill in the packaging arts at the time the invention was made to provide a station for handling the packaging laminate that uses rollers for the means of transporting the laminate as taught by Bowen and recited in claim 4.

22. Regarding claims 3, 10, 13 and 17: It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the compression line wider than the perforation line because on and around the perforation line is where the laminate would need to be weakened to facilitate tearing. It would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize this width as claimed in claims 3, 10, 13 and 17 to increase the frangibility of the laminate product.

23. Regarding claims 11 and 18: Bowen teaches using polyethylene or polypropylene as the thermoplastic material to produce a paperboard laminate as recited in claim 11. It would have been obvious to one having ordinary skill in the packaging arts at the time the invention was made to vary the surface weight or grammage of the thermoplastic material as recited in claims 11 and 18 in order to optimize the product based on the end use of the film. A thicker layer would provide

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more protection of the paperboard while a thinner layer may be preferable for lighter weight packaging. Furthermore, there appears to be no criticality to the ranges of surface weight or grammage of the thermoplastic material as recited in claims 11 and 18.

24. Claims 1, 3, 5, 7, 8, 10, 12-16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bowen U.S. Patent No. 3,909,582 and Masui U.S. Patent No. 4,834,244 as applied to claims 1-5 and 7-11 in view of Mayall U.S. Patent No. 1,126,816.

25. Bowen and Masui do not address the dimensions of the tool used to compress the paperboard laminate. These references are also silent regarding the width of the compression in which the perforation line is formed.

26. Mayall teaches "a machine to automatically by a sequence of operations upon a sheet of card or other board form creasings" (Col. 1, lines 10-13).

27. It would have been obvious to one having ordinary skill in the packaging art at the time the invention was made to arrange a plant for the manufacture of the claimed packaging laminate having stations to perform the steps necessary for production of the laminate in logical succession as recited in claim 5.

28. It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the size of the projections on the compression tool used to achieve the desired compression width (claims 3, 5, 10, 13, 14 and 17) and depth

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(claims 5 and 15) as well as to utilize an adjustable gap between the roller used to compress the paperboard and the counter roller as recited in claim 5 as this relates directly to the width and depth of the compressed area (a result effective variable). The examiner notes that the word crease as used in Mayall is equivalent to the compression described by applicant. Mayall evidences that creasing of paperboard is widely known and while Mayall does not specifically disclose a roller and counter roller system it is the examiner's opinion that this technique for forming creases is universally known in the paperboard art. "Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.'" *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734 (2007).

29. *KSR* reaffirms the analytical framework set out in *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1 (1966), which states that an objective obviousness analysis includes: (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; and (3) resolving the level of ordinary skill in the pertinent art. *KSR*, 127 S. Ct. at 1734. Secondary considerations such as commercial success, long felt but unsolved needs, or failure of others "might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented." *Id.* (quoting *Graham*, 383 U.S. at 17-18). According to *KSR*, "when a patent claims a structure already known in the prior art that is altered by mere substitution of one element for another known in the field, the combination must do

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more than yield a predictable result." *KSR*, 127 S. Ct. at 1740. In the instant case, the substitution of the roller/counter roller recited by applicant yields the predictable result of producing a crease as suggested by Mayall. The examiner notes that the recitation of a "smooth circumferential surface" is not interpreted to specifically limit the geometry of the crease produced since this recitation can be viewed to encompass counter-rollers having no surface projections disposed on them and counter-rollers having surface projections but also having a polished, smooth surface.

30. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have optimized the variables above in order to achieve the most desirable compression of the laminate in terms of frangibility. As stated in *Masui*, the strength of the non-cutout portions of the fiberboard is decreased by compression. It would have been obvious to one of ordinary skill in the art to optimize the amount of compression of the paperboard in order to control the frangibility of the laminate depending on the intended use of the package. The range of 20-70% compression recited in claims 1, 8, 12 and 16 would have inherently been obtained by this optimization. Since the motivation for providing the compression line taught by *Masui* is to increase the frangibility of the perforated line, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the compression step could be performed before or after the perforation step to still produce the same outcome in decreasing the strength of the paperboard. Therefore, the method step recited in claim 1 and the product-by-process step recited in claim 8 of compressing the

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paperboard before the perforation step would have been obvious to one of ordinary skill in the art.

31. Additionally, there appears to be no criticality to the ranges of size neither for the projecting compression portion of the roller as recited in claim 5, 14 and 15 nor for the ranges of the width of the compression produced as recited in claims 3, 10, 13 and 17.

32. Regarding claim 7: It would have been obvious to one having ordinary skill in the packaging arts at the time the invention was made to provide a station for handling the packaging laminate of claim 5 that uses rollers for the means of transporting the laminate as taught by Bowen and recited in claim 7.

Response to Arguments

33. Applicant's arguments filed 6/23/08 have been fully considered but they are not persuasive. In response to applicant's argument on pages 8 and 9 of the remarks that since the references cited in the previous rejections are not concerned with the thermoplastic residue or its position relative to the packaging laminate that these references cannot be combined to yield the claimed invention, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). The combination of the references previously cited produces an article that is the same as that claimed by applicant. As addressed above, applicant's recitation that the compression is performed after laser perforation would have been obvious to

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one of ordinary skill. Applicant has provided no evidence that the disposition of this method step before or after laser perforation produces a materially different product. Since the performance of this method step does not appear to materially affect the product produced, it is the examiner's opinion that it would have been obvious to perform this step either before or after perforation.

34. Applicant's assertion on page 10 of the remarks that Mayall does not disclose a compression tool including a roller which displays a projecting compression portion around its circumference and a counter roller which displays a smooth circumferential surface is addressed above as an obvious substitution of equivalents to yield a predictable result. Applicant asserts on page 11 of the remarks that Masui does not disclose this feature either, but as stated above, the recitation of a smooth circumferential surface does not specifically limit the geometry of the crease produced.

35. Applicant asserts on page 12 of the remarks that the location of the residual thermoplastic material is not inherent in the disclosures of Weiteder and Masui, but provides no arguments or evidence that the combination of these two references to produce paperboard with a laser perforation disposed in a crease would not have the same location of the residual thermoplastic material as claimed by applicant. MPEP 2112 Part IV also states that "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) In the instant case, the combination of the references cited in the

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previous office action produces the same method as claimed by applicant. Therefore, it logically flows that the article produced would be the same as claimed by applicant.

Applicant has failed to provide evidence or arguments that the combination of the teachings of these references does not result in the same method and article as claimed by applicant. MPEP 2112 Part V states “[T]he PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product. Whether the rejection is based on inherency’ under 35 U.S.C. 102, on *prima facie* obviousness’ under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same...[footnote omitted].” The burden of proof is similar to that required with respect to product-by-process claims. In *re* Fitzgerald, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980) (quoting *In re* Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)).

Conclusion

36. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELE JACOBSON whose telephone number is (571)272-8905. The examiner can normally be reached on Monday-Thursday 8:30 AM-7 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. Lawrence Tarazano/
Supervisory Patent Examiner, Art Unit 1794

Michele L. Jacobson
Examiner /M. J./
Art Unit 1794